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Abstract of monthly report for Section II-III

The routine analysis of the urine of Chicago and Clinton for plutonium has continued. No results have been recorded which would indicate a high exposure. Small volumes, 100 ml, are still being used for the Chicago specimens. This, however, will be changed in the very near future.

Research on methods for urine analysis has continued. On the basis of the data available the BiPO₄-LaF₃ method appears to be the more logical to adopt for routine use. The procedure which makes use of ashing the urine has the advantage of being more easily worked and in all probability would be more reliable.

The adsorption process has some decided advantages and therefore research will continue on this process. The results of the last few experiments have been most encouraging.

During the past month the patient injected with plutonium died as a result of extension of the neoplasm. A post-mortem was obtained. The liver had 33% of the amount of plutonium injected. The bone marrow taken from one rib gave the highest specific activity of any tissue; it had 70 counts per minute per gram of tissue. The details of the tissue analysis will be found in the monthly report.

1631 films were developed during the month. 19 over exposures were noted of which eight were shield and window over exposures and eight were window over exposures. Three wrist badges were found to have readings greater than 0.6 r. 300 pocket meters were read during the month. 22 over exposures were noted.

Delivery of alpin survey and hand meters stepped up considerably during the past month. This followed the essential completion of similar orders from I. The availability of these instruments will considerably simplify the work of the Health-Physics group. Turnover in personnel during the past month has been considerable following the removal of war manpower control. This has created a training problem in the section.

Slow neutron flux measurements are being made on a routine basis at the Argonne. Numerous areas are being found which have flux greater than

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1500 slow neutrons per square centimeter per minute. For the most part these are not in work areas. Survey of off-project rooms for contamination has occupied much of the special surveyor's time. Numerous areas in Kent and Jones have been found which have above permissible levels of alpha, beta or gamma activity. Procedure for decontaminating such areas and informing the University of such decontamination has been the subject of numerous discussions.

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cc: R.S. Stone
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